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Post-Cognitivism and the Indissoluble Bonding of Languaging, Embodiment, and Thinking

Filippo Batisti
Universidade Católica Portuguesa – CEFH Braga, Portugal

Marcos G. Vidal
Universidad Autónoma de Madrid, Spain; Universidade Católica Portuguesa, Portugal

Abstract Classical cognitive science often strips the inherent social character out of language, treating it as a system of internal mental representations, and so does Generative Linguistics. In contrast, post-cognitivist approaches to psychology reject representationalism but struggle with language's capacity to refer beyond sensory experience. Cognitive Linguistics addresses meaning and embodiment but remains somewhat isolated from broader post-cognitivist thought. The enactive approach overtly problematizes the concept of representation, but tends to marginalize language; when such focus is taken, a coherent account of semantic content remains an unresolved task. This paper surveys philosophical and linguistic perspectives on language within post-cognitivist frameworks and proposes a blueprint for future research based on four points: sociality and interaction, embodiment, ecological validity, and representation-as-*praxis*.

Keywords Post-cognitivism. Languaging. Representations. Embodiment. Cognitive Linguistics.

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1 Introduction

Language[1] embodies the ultimate way of sustaining sociality – understood as coordinative cooperation – and cognition. Languaging has proven evolutionarily effective in making our ways of acting in the world closer to our needs and in providing possibilities for novel strategies for pursuing our aims, including leading us to identify entirely new ones. Thinking, one might argue, leads to better speaking, and speaking better makes us think better.

In the philosophy of mind, emphasis has typically been placed on the cognition-enhancing efficacy of words, texts, and utterances (Clark 1998), often neglecting the social dimension. In fact, the disregard for sociality as a fundamental feature of cognition is inscribed in the assumptions of classic cognitive science. Within the post-cognitivist family of approaches to cognition (Heras-Escribano 2019), however, overcoming methodological individualism and foregrounding the intrinsic social nature of our mind is a manifest goal.

Yet, a consensus on a comprehensive account of language seems far. While post-cognitivists are eager to replace disembodied cognitivist views in each chapter of the classic cognitive science book, the established view of language is proving to be an especially tricky one to unpack, and disagreements within different post-cognitivist positions arise here too.

We start by outlining the conceptualization of language within classical cognitivism and, conversely, the cognitive dimensions of coeval linguistics. Then, we review the contemporary attempts to overcome the aforementioned problems. Finally, we propose a blueprint for a post-cognitivist, socially grounded view of language.

Throughout our analysis, we integrate insights from both philosophy and linguistics, as we contend that post-cognitivism can only benefit from the interdisciplinary study of a complex phenomenon like language.

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2 Classic Cognitive Science and Language

2.1 Language in the Philosophical Representation Wars

Classic cognitive science is grounded in the Representational Theory of the Mind (RTM). Somewhat paradoxically, there is no consensus on what representations are or how the term should be precisely used (Smortchkova et al. 2020, 1; Coelho Mollo 2022, 1048-9). A key reason behind the lack of agreement is the recognition that representations are varied in kind, making it challenging to settle on a single, comprehensive definition. Nonetheless, RTM's fundamental stances can be articulated clearly: the mind operates through descriptions of the external world, which guide action via computational processes. These descriptions may be minimal – more than the term 'description' might suggest – but this does not alter the theory's core claim: action in the world requires the agent to first reconstruct the relevant features of the environment and then act based on this even minimal reconstruction.

Within non-representational accounts of cognition, language has emerged both as a deeply problematic and unavoidable topic. This is largely because language – traditionally understood across theories as an inherently representational tool – enables us to speak of what is not immediately present to the senses. Of course, we just as often refer to things that *are* in the immediate physical context of the speakers. In principle, reference to such items can be made through a willful dart of our gaze, pointing with fingers, moving our limbs, etc. However, gestures are limited in scope and effectiveness compared to the virtually limitless possibilities language offers.

With these greater possibilities, though, come greater risks of failure: as words detach from the *hic et nunc*, achieving mutual (practical) understanding becomes an increasingly difficult goal. But language possesses an intrinsic counterbalance: meaning is constituted and reinforced through shared interaction between speakers. Since senses and bodies are not apparently involved, and gestures fall short of meeting the challenge, a different mechanism must be at work. The traditional twentieth-century explanation invokes mental representations that link words to meaning, with the key steps of the process occurring within the mind of each speaker. This mainstream view of language, however, poses a significant obstacle for theories that aim to discard representations as the fundamental explanatory postulate.

The intersection between explanations of cognition at large and language is particularly delicate. Why? The fundamental disagreement between cognitivists and their antagonists hinges on how animal behavior is explained. "Content" has emerged as a crucial explanatory category as a medium between agents and the world. If

"[r]epresenting correctly explains successful behaviour and misrepresentation explains failure", then "a good theory of content should show how the contents it specifies are suited to explaining behaviour in that way" (Shea 2018, 28). Contentful mental representations are posited to have a fundamentally semantic nature. This is why cognitivism integrates linguistic elements seamlessly into the framework of RTM, treating them as unproblematic: words represent states of affairs in the external world and are understood or produced through their intentional relationship to those states. By contrast, since most post-cognitivist approaches commit to various forms of anti-representationalism, an alternative account is in order.

This debate mirrors a well-known twentieth-century philosophical dichotomy between *knowledge-that* and *knowledge-how*. Cognitivism asserts that practical skills (*knowing-how*) depend on propositional knowledge (*knowing-that*), whereas post-cognitivism argues the inverse: *knowing-that* is a non-basic cognitive process, while *knowing-how* is evolutionarily and logically prior (see Ryle 1946). By definition, *knowing-that* implies truth-functionality, i.e., a structure of knowledge in which the information of which one may have knowledge is put in terms of a certain state of affairs being either true or false. In contrast, *knowing-how* refers to practical abilities that do not necessarily depend on (accurate or less) propositional knowledge as a prerequisite for action.

Post-cognitivists generally acknowledge that representation exists as a cognitive function, at least in certain cases (see Miłkowski 2015, 75). However, they contest that internal mental representations are part of the fundamental mechanisms of cognition, or that accuracy conditions enable agents to function in the world. That said, some mental processes are admitted to being "representation-hungry" (Clark, Toribio 1994; Hutto, Myin 2013), with language spearheading the group. A key argument for this concession is that some linguistic elements possess intentionality, or *aboutness* (Shea 2018, 8) – the ability to refer to entities not immediately available to the senses, such as what is in the past, the future, geographically distant, or abstract concepts.

But can language be reduced to components with clear *aboutness*, such as names? What about the many well-documented non-referential aspects of linguistic activity? Before addressing these questions, let us turn to the other side of the debate: linguistics.

2.2 Cognitive Science in the Linguistic Wars

The role of meaning has been a central pillar in the tensions and developments across different fields in linguistics, even predating the emergence of cognitive science. Saussurean structuralism provided linguistics with its foundational modern framework, laying the groundwork for subsequent paradigms, including formal accounts

of language, such as generative linguistics, and usage-based frameworks like Cognitive Linguistics.

To understand how sociality informs the history of linguistics, we must consider the basic tenets of structuralism. At its core, structuralism conceives language as a social system of mutually determining categories. For Saussure (1916), "[n]atural languages are symbolic systems with properties and principles of their own, and it is precisely those properties and principles that determine the way in which the linguistic sign functions as a sign" (Geeraerts 2010, 48). Language is thus a received system of conventionalized and arbitrary combinations of signs, where the value of any linguistic element derives solely from its place within the system and its differential relationship with other elements. This arbitrariness of the sign led Saussure to focus on the structured relationships within the system rather than the historical evolution of words or individual beliefs, as expressed by the relation between *langue* and *parole*.

He also proposed that the relationship between the components of a sign is mediated by a *mental image*, enabling the externalization of the system's structure. While his analysis of *parole* introduced a psychological dimension to meaning articulation, the focus remained on the external system.

From the 1950s, generative linguistics transformed structuralism by conceptualizing language as a generative system governed by a finite set of rules capable of producing an infinite array of sentences. While structuralism concentrated on the external system of linguistic rules, generative linguistics shifted to the internal representation of these rules and their cognitive realization within individuals. In this new framework, the scope of the discipline expanded from comparing linguistic systems and their taxonomies to investigating the fundamental nature of the mind. By addressing the homogeneity of the human genome, Chomsky (1968; 1980) sought to prove the genetic basis of language, positing that it was rooted in universal properties of the human species. If the new goal of generativism was to identify the genetic roots of language, the socially constituted systems described by structuralism became increasingly sidelined.

Here is where the concept of representation became central for generative grammar. Although Saussure acknowledged internal mental images, for Chomsky and cognitivism, representation had a slightly different use. Linguistic knowledge was viewed as neurologically localized and autonomously realized. Thus, drawing from the computational metaphor, the combinatory rules of any language could be algorithmically represented, processed, and studied. However, the uniqueness of human language lied not in its symbolic nature, but in its capacity for syntactic complexity and creativity. This explained the primacy of syntax with a minimal emphasis on meaning, given its historical and cultural variability.

Tensions surrounding the role of meaning erupted in the 1960s during the so-called "Linguistic Wars" (Harris 2022), gradually prompting the recontextualization of grammar and the reintegration of semantics into linguistic studies. These debates underscored the sensitive role of meaning and grammaticality, particularly in light of Chomsky's famous example: "Colorless green ideas sleep furiously". Originally presented as a grammatical and yet meaningless sentence, this example illustrated the autonomy of syntax from semantics. However, Katz and Fodor's (1963) *componential analysis*, which sought to systematically represent meaning and incorporate it into syntactic structure, reevaluated whether sentences lacking coherent meaning could truly be considered grammatical. Their inquiry arose from the observation that certain syntactic transformations – modifying rules between the deep structure and surface structure – could alter meaning in nontrivial ways, such as the transformation from active to passive voice in some sentences. If meaning played such a central role in syntactic operations, allowing semantics to take precedence would challenge Chomsky's autonomy of syntax, thereby endangering the core explanations of language acquisition and the universality of grammar. These challenges not only brought semantics to the forefront but also set the stage for future accounts on the intersection between meaning, body, and sociality.

3 Language from a Post-Cognitivist Perspective

Having outlined the parallel development of cognitive science and linguistics in the latter half of the twentieth century, we examine the present-day landscape. As the classic frameworks of cognitive science and both structuralism and generativism faced increasing criticism, new perspectives emerged.

3.1 Cognitive Linguistics

As a result of the Linguistic Wars, a branch of cognitive semanticians emphasized the primacy of meaning, leading to the development of Cognitive Linguistics (CL) (Johnson 1991; Lakoff, Johnson 1980), a cornerstone of post-cognitivist linguistic approaches since the 1980s. Structuralism left a blind spot between *langue* and *parole* in explaining language acquisition, which generative grammar addressed by introducing the notions of genetic and internalized linguistic knowledge (competence) and its individual production (performance). However, this downplayed the social dimension of language.

By stressing semantics, CL adopts a more integrative approach. A grammar based on constructions – pairings of form *and* meaning

(Langacker 2009) – replaces generative syntax. CL also examines how semantic categories are structured through conceptual metaphors, image schemas, and prototypical relations. For the purpose of this paper, what interests us most is that, across these research areas, bodily experience is central in shaping linguistic functions.

Although CL aligns with post-cognitivist approaches, its trajectory diverged into a more independent line of inquiry. Unlike other post-cognitivist strands overtly critiquing representation, CL adopts a nuanced stance. Lakoff and Johnson's *Philosophy in the Flesh* (1999) apparently rejected traditional notions of representation, but their evaluation was not a wholesale dismissal. Lakoff (2014) maintains that representations play a key role in frames and metaphors, understood as fixed mental structures organizing knowledge in an automatic, unconscious manner.

Despite providing an embodied explanation of language, the body in CL often appears as self-constituted and universal, resembling the brain-centric perspective of generativism. This reductionist view treats sensorimotor experience as belonging to a generalized or prototypical body, neglecting the interactions between organisms and their environments and overlooking individual differences and diversity of experience. In addition to this handicap, Zlatev (2007) identified several enduring issues within cognitive science broadly and CL specifically:

> [T]here is no uniform concept of *representation* within 'embodied cognition' […] embodiment theories have a strong individualist orientation, and despite recurrent attempts to connect embodiment to social reality and culture there is still no coherent synthesis. […] there is no adequate notion of *convention* or *norm*, which is essential for characterizing both human culture and the human mind. (Zlatev 2007, 242 emphasis in the original)

The universalist view of the body, the underspecified notion of representation, or the individualist account of cognition catalyzed a sociocultural turn in the study of language. This shift challenged the primacy of the universal unaltered body, advocating for a more integrative perspective. Debates over universality versus cultural specificity within CL testify its internal tensions (see Geeraerts, Grondelaers 1995; Kövecses 1995). Some of these studies stress a *sociosemiotic commitment*, "a return to a Saussurean conception of language as a social semiotic without the Saussurean assumption of the internal homogeneity of language systems" (Geeraerts 2016, 536).

Despite growing acknowledgment of bodily and cultural interplay in CL, the theory often resorts to vague notions of interrelatedness when explaining how they are constitutively built. "[C]ognitive linguists had better admit that they do not know yet how exactly to

reconcile the two [cognitive and sociosemiotic] commitments." (Geeraerts 2016, 538). Different dimensions emerge theoretically unified by experience while methodologically utilized as self-constituted domains with their own internal logic. For example, linguistic normativity is exclusively framed as correctness or appropriateness to social contexts, such as conversational roles, shared knowledge, and cooperative maxims. "Epistemologically, our knowledge about the content of norms is ultimately based on *intuition*, not on observation or sense-perception" (Mäkilähde, et al. 2019, 2-8).

This framing overlooks normativity as a constitutive element in perception itself, such as vision. Rödl (2018) argues that normativity is present in perception from the outset. For example, saying "That table is brown" presupposes not only social norms about the correctness of linguistic rules or about common knowledge of what constitutes a table, but also a normative act embedded in *seeing* the table as a discrete object and its color as brown. To perceive the brown table is to engage in a normative judgment: one must identify the discrete object as a table, recognize its color as brown, and commit to these elements as relevant. This involves aligning perception with rational standards of correctness – how things 'ought to be' within the framework of intelligibility. Treating normativity or sociality as external layers added to embodiment risks fragmenting experience and losing an integrative account of language and cognition.

Recent efforts aim to introduce more dynamic approaches to studying language, where intersubjectivity has become a central asset (Soares da Silva 2021), though it is sometimes framed through Theory of Mind and metarepresentation – rooted in classic cognitivism. Moving beyond CL, enactive and ecological approaches are gaining traction in metaphor studies and broader linguistics (Gallagher, Lindgren 2015; Gibbs 2019). As research shifts toward ecological approaches, it increasingly diverges from traditional CL models. Ecological accounts of language face challenges common to fields addressing organism-environment interactions, such as the status of representation and modeling dynamic processes. In an effort to bridge CL and ecological psychology, Inoue (2023) suggests that the meaning of nouns arises from co-occurring verbs, best understood as "bundles of affordances". However, as of yet, limited clarity has been provided on the nature of these bundles or their (semi)representational status.

3.2 Post-Cognitivism

While CL can be seen as continuous with post-cognitivism in psychology in some respects, the treatment of language by the latter has taken distinct directions.

Although the term *languaging* originates with Maturana and Varela (1980), enactivists only began properly focusing on language at a later stage. The most significant contribution in this area is arguably *Linguistic Bodies* (Di Paolo et al. 2018), which is introduced as the first coherent, embodied, and social conception of human language that does not rely on mental representations. There, languaging is described as a "way of living", a form of social agency that ultimately reflects our embodiment as sense-makers. The book can be interpreted as an effort to extend concepts that are essential to enactivism *in general* – such as "agency" and "autonomy" – into the vast domain of language. Another compatible interpretation sees it as a case study aimed at addressing the "no higher-order cognition" objection often leveled against enactivism. More recently, Cuffari and Figueiredo (2025, 1), in the same enactive vein, advanced a novel definition of "utterances" as "co-authored meaningful acts", common to non-human and human animals. Thus, they can "deconstruct the natural/nonnatural sign dichotomies that stall the work of finding continuity across sense-making species". In so doing, they reject the Theory of Mind model as well as moderate views that still rely on mindreading as the *explanans* of social cognition (which includes language). Cuffari and Figueiredo hold that minds are created socially and there are no such things as private intentional states to be "read" by "other minds" for behavior coordination. In other words, they apply the enactivist of finding explanations for behavior more in "organism-environment interactions and interactive dynamics" (26) rather than through positing exorbitant capacities of individual minds.

Before these last developments, others pursued different routes from that of autopoietic enaction to criticize cognitivism Van den Herik (2019, 45) noted that if one is to exclude internal representations, then "the received view of linguistic knowledge cannot be correct. However, as of yet, no alternative account of linguistic knowledge has been proposed". Similarly, Gahrn-Andersen agreed that in contemporary enactivism "only little attention […] to the phenomenon of language" was paid. In these very few cases, like Hutto and Myin's (2013; 2017) radical version of enaction, "they end up considering language in ways that are at odds with enactivism's non-representationalist basis (Gahrn-Andersen 2019, 167).

What Hutto and Myin (2013) called the "Hard Problem of Content" (HPC) relates to this. In short, language, more than any other cognitive process, is intentional, i.e. refers to entities in the world and enables us to do that *in absentia* (Miłkowski 2015, 79). If one agrees

with the idea that the very concept of representing implies a degree of identity between the representee and the representation, it seems almost impossible for a representation to be about nothing, or be about something so fuzzy that cannot be described in terms of accuracy or satisfaction conditions (see van den Herik 2019, 12). The claim that cognitive science can renounce contentful representations leads to the Hard Problem of Content. If one holds that the only acceptable kind of information within a naturalistic framework is covariance, then the anti-cognitivist is thus constrained from allowing semantic information to be the currency of such high-level cognitive processes. Here "semantic" means information that is described in terms of veridicality, accuracy, etc. Assuming that naturalism cannot be renounced, it seemed to some (Harvey 2015; Miłkowski 2015) that the dilemma could be resolved only by taking two opposite paths. The first is to concede that representations do have a place in the architecture of human cognition. The other one is to hold the fort and find explanatory alternatives. The solution offered by Hutto and Myin consists in adopting a teleosemiotic reading that tones down the explanation, summoning a notion of "Ur-intentionality" (directedness toward the world based on a sensitive responsiveness to natural signs) in the acts of organisms that, however, do not qualify as veridical (i.e., semantic).

A different route is taken by Moyal-Sharrock (2021), who considers Wittgenstein an enactivist *ante litteram* and a well-suited source to address HPC: "I see language as fundamentally enactive, and the emergence of language as simply a seamless *extension* of action" (S406). Moyal-Sharrock is closer to the broad view expressed by Di Paolo et al. (2018), emphasizing the continuity between language and (inter)action, and rejecting any exceptional metaphysical status for minds that manipulate symbols, whether linguistic or mathematical. To focus on how information (content) makes its way into the mind, as per her interpretation of Wittgenstein, would amount to missing the point of language as a refined form of social action:

> We come to extend the scope of our ways of acting through grammar—that is, through a *normatively* generated and sanctioned use of words or symbols. The generating, sanctioning, transmitting, and understanding of these symbols are all logically due to, or embedded in, action; that is, they are inherently enactive. (Moyal-Sharrock 2021, S417)

Van Dijk (2016, 1002) draws on Wittgenstein's description of language games too, arguing that non-representationalist views of language must avoid the reification trap afforded by our experience: that would turn "the ongoing world into a static realm and [segregate] it into process-source, word-meaning, and subject-object dichotomies".

Instead, the focus should be on language's "contextual flow of activity" as it "continuously comes forth as meaningful and brings forth a meaningful situation by having linguistic activity continuously shape and (re-)direct the flowing situations from which and into which it flows" (1001).

Similar grounds are covered by the Distributed Language Approach (DLA), prioritizing situated interaction as the conceptual starting point. Proponents often downplay the very concept of "language" (and "languages", see Saraceni, Jacob 2019), not to prioritize Saussure's *parole* over *langue*, but because the distinction itself is held as fallacious. Languages are considered mere analytical constructs with no real-world referent (Love 2004). Therefore, even discussing their "usage" is problematic (see Batisti 2021for a critique). Instead, DLA emphasizes *languaging*, highlighting the inherently situated and dynamic nature of linguistic experience. The idea of language as an autonomous entity is rejected, as it can only be maintained by neglecting the lived, embodied, and situated aspects of linguistic activity (Cowley 2019). Cowley (2024) underscores the connection between the structuralist view of language and its implied psychological counterpart. Agency is mostly attributed to the hypostatized language-systems, while speakers are reduced to "performers who rely on mind or, perhaps, *habitus*" to manipulate *abstracta* (words, etc.) that constitute language systems:

> If *abstracta* can be understood as having meanings, one assumes a methodological individualism. For the purposes of analysis, one posits that the relevant decision-making is organism-centred [...] Thus, any appeal to form hints at inner process or, at least, constructs that the folk attribute to a concept of mind. (Cowley 2024, 86)

Cowley not only critiques Chomsky's attribution of "generative powers to a mind/brain" but also argues that framing the "use of language" as a distinct concept follows the same reductive logic. This approach neglects "living beings, coordinative activity, and practices", which are central to *languaging*. Gahrn-Andersen (2024, 135) takes an even more radical stance, dismissing as meaningless the separation of language and cognition in adult humans. For him, all linguistic activity is inherently cognitive – though understood broadly as part of "our enacted, socio-material doings".

Others, critically drawing on the tradition of ecological psychology,[2] have developed anti-representationalist accounts of linguistic

2 Kiverstein and van Dijk (2021) criticize Gibson (1979), noting a "double standard" in his ecological psychology. While Gibson proposed an anti-representationalist theory

cognition. Kiverstein and Rietveld (2020) restrict the veridical character of representation to some special kinds of language use, namely, assertions. Thus, they address the "higher-order cognition" objection by reframing linguistic thought as another form of *skilled intentionality*, rooted in sociomaterial contexts. "Enlanguaged affordances" is what people engage with, among a plethora of other affordances, different in quality. By confining accuracy and veridicality conditions to assertions, their view emphasizes the situated and actional nature of language. The ecological-enactive view frames practical situations involving linguistic elements as non-representational, conceptualizing them as forms of *doing* or *know-how* (see Gahrn-Andersen 2019, 170).

Gahrn-Andersen (2023, 77) radicalizes again this view, claiming that a sharp distinction between "linguistic and non-linguistic affordances obscures the fact that so-called non-linguistic affordances (i.e. affordances devoid of symbolic representations) have the potential for being 'enlanguaged' in the sense of being conditioned by language-related knowhow". Mental content, in other words, is not necessarily a prerequisite for enacting practices successfully, even when such practices involve concept-based perception.

The strategy here is, again, to *steer away from* the Hard Problem of Content by understanding all linguistic activity as fundamentally contentless by framing even sophisticated activities like metalinguistic debates as the following of specialized perceptual cues – linguistic ones – that are akin to cues in other perceptual domains, like vision. Although the question of how content entered human cognition is presented as extremely problematic by Hutto and Myin, not everyone among post-cognitivists agrees on its problematic status in the first place (Ramsey 2023). It is symptomatic that more recently some, like Cuffari and Figueiredo (2025, n. 7), refrain – at least for the time being – from making the notion of content central to their explanation of the same phenomena. However, the avoidance of HPC by alternative views may leave philosophers unsatisfied, since avoidance of a problem does not equate to its proper dissolution.

4 A Blueprint for a Post-Cognitivist View of Language

We have shown how cognitive science and linguistics have treated the interface of language and thought from different vantage points. While we sympathize with the recent post-cognitivist developments, we believe there is still room for progress.

On one hand, there is clear disagreement on foundational issues: opposing cognitivism means renouncing the Descartes-inspired view

of perception, he paradoxically characterized language as containing "information".

that preferred abstraction of bodies over particularities, situated contexts, and diversity as the best way of producing scientific generalizations, and elected the mental as the source of universality. The post-cognitivists' opposing thrust implies retrieving the body, not assuming the mind is (always) a calculator, making room for diversity within generalizations, and retrieving the interactional nature of linguistic behavior.

On the other hand, providing equally robust explanatory accounts has proved a hard challenge. Recent ecumenical efforts (Heras-Escribano 2019, Brancazio 2020, Baggs, Chemero 2021) appear to be now in crisis[3] not to mention the missing link between said novel streams in philosophical psychology and the latest Cognitive Linguistics (but see Sinha 2024). While the failures may be partly due to contingent and all too human reasons, purely theoretical tensions are surely at play.

Within the enterprise of the construction of non-cognitivist views of language, we delineate four tenets for an explanation that integrates philosophical, psychological, and linguistic elements: sociality, embodiment, ecological validity, and representation-as-*praxis*.

4.1 The Social and Interactional Dimension

While much progress is underway in the domains of social cognition, post-cognitivists ought to prioritize language as the next field of study within the explanatory competition with RTM-based views.

The first key theoretical step to differentiate the new proposals is to adopt a different philosophical understanding of "language". Classic cognitive science, backed by generativism, defended a narrow working definition of language that, in turn, channeled its study within avenues that, decades later, proved to be dead ends. Instead, a post-cognitivist account of language should look up more to Vico, Herder, Humboldt, Boas, Croce, Mead, and Wittgenstein, rather than Descartes, Locke, Saussure, Chomsky, or Fodor in acknowledging that language is first and foremost a culturally-situated form of social interactivity rather than a mental "faculty" or a "system".

Languaging is an intrinsically social, interactional form of cooperative coordination. "Language" as a name already leads to the erroneous objectifying view. "To language" as a verb, echoing the Humboldtian view, fits our picture better. Due to its cooperative

3 We can only offer anecdotal evidence for this claim, based on talks given at relevant conferences in the last few years. While this renewed disagreement has not been put in writing yet, our experience indicates that, at least on the part of ecological psychologists, a strong resistance towards enactive concepts like that of "sense-making" is in place.

nature, it cannot be learned in isolation. Furthermore, knowing how to speak implies knowing how to listen (or, at worst, how to be quiet at the right time). Turn-taking, for one thing, is a fine-grained infrastructure that is taught and learnt *interactionally* – and necessarily so – and the knowledge of its workings is mostly implicit (see Styvers et al. 2009). But this is old news for conversation analysts and, more generally, linguists who study situated interaction. In Maynard's formulation:

> Once language comes to be studied as a lived phenomenon, whereby units of speech […] achieve objectivity through practices, and investigators examine these practices as participants deploy them [in] interaction, it means abandoning propositional or ideal approaches to language. […] The preoccupation with abstract and transcendent forms means a diminished comprehension of language as it is lived through bodily enactments […]. (Maynard 2012, 28)

The crucial further step here is to ask questions like: how can we make these pieces of knowledge fall into place within a cognitive (but not cognitivist) framework, given the quasi-behavioristic tendencies of Conversation Analysis? How can the obvious cognitive significance of, say, the intricacies of turn-taking or the calculation of pronominal ways of addressing others (e.g., Sidnell 2019) be included as an integral aspect, and not a marginal one, of how we language? Cuffari and Figueiredo (2025), for instance, provide some answers in this respect following an evolutionarily continuist account of the origins of language with non-human animals, avoiding appeals to individualist premises such as mindreading or the positing of internal mental representations. By the same token, classical behaviorism is ruled out too, as their enactive picture abstains from dichotomies between "the observable and unobservable, mind and body, inner and outer" (20).

4.2 The Role of the Body

In accepting the premise that the mind – and, by extension, languaging – is largely embodied, issues regarding the status of the body arise. As we recognize our inherent social constitution, the body abandons its universal, unaffected status; there are no bodies in isolation, nor are all bodies equally shaped by their environments.

This perspective has two key implications. First, it supports an interactional approach to the study of languaging, as previously noted. Analyzing linguistic interactions requires a multimodal and holistic framework that integrates words with gestures, posture, and other bodily movements. This claim resonates with the idea advanced by G.H. Mead that linguistic activity is a sophisticated form of social

action and, as such, builds on gestures, which are an evolutionary prior and ontogenetically more basic form of communication (see Baggio 2025). Second, while CL has demonstrated that language and concepts are deeply embodied, the sociosemiotic commitment must also challenge the body as a neutral means of languaging. Instead, linguistic activity is fundamentally interwoven with experience in its broadest sense, including how the body plays a role in it, and decisively moving beyond the autonomy of Saussurean linguistics.

As Gahrn-Andersen (2024, 136) argues, "considering how perception feeds into cognitive faculties such as memory and imagination, it is indeed difficult to see how any cognitive behaviour pertaining to linguistically competent human beings can be completely devoid of conceptual influences". However, rather than framing these relations as "influences", bodies and language are better understood as mutually constitutive: the experience of one's body is embedded in how it is linguistically represented. Without this perspective, and if we concede cause-effect chains, we risk falling into Cartesian dualism. For example, Ilyenkov (1977) talks of a relation of organ, where thought is not the product of bodily action, but the action itself.

This aligns with earlier discussions of normative practices, which assert that norms are not secondary to perception but embedded in it from the outset. For example, the composition of a language variety, such as the presence of nouns, enables the identification of objects, while the existence of discrete objects simultaneously establishes a need in the development of nouns in such language variety. This, however, raises issues related to the effects of linguistic diversity. Contemporary studies in linguistic relativity continue to grapple with the extent to which language constrains or shapes cognition. So far, an autonomous linguistic system where meaning is relatively fixed and in which linguistic varieties both reflect specific cultural experiences and function as a constraint for certain perceptive cues, such as color identification, has been always presupposed. However, this view risks entering an endless cause-and-effect chain, introducing explanatory gaps that challenge any theory attempting to account for the *continuity between life and language* (Di Paolo et al., 2018; see Rodríguez Jordá, Di Paolo 2023).

As previously stated, our position seeks to avoid any form of Cartesian dualism while also moving beyond reductive materialism. In this sense, the relationship between body and language must be understood as hylomorphic, wherein no strict distinction exists between *Leib* and *Körper*. Language is neither an emergent product of experience nor a mere function of the body, but rather a principle of their organization. In other words, language operates as the formative ground that gives bodily experience its structure and intelligibility. Although full-blown linguistic behavior reaches completion later in evolutionary terms, a proper hylomorphic relation between form

and matter stipulates that language is not reduced to a secondary asset that exerts an external influence on bodily experience. Instead, the body provides the necessary conditions for the realization of language and is itself an essential part of that realization. Conceptualizing languaging as the very form the body takes in action, rather than as a social construct or an added layer of experience, provides a way to avoid both linguistic constructivism and naive realism about discrete objects while maintaining a continuity-based approach.

The relationship between linguistic activity and bodies also highlights the need for a situated perspective that accommodates the variability of human experience. This requires moving beyond the concept of a universal body or the universal status of cognition and language. Instead, universality should be placed in activity itself, conceived as the fundamental *locus* of the mental.

4.3 Ecological Validity

If language is indeed an "ecological phenomenon" (Steffensen et al. 2024), its study cannot disregard the ecological conditions in which it is subject to scientific inquiry. Vico (2015, § 445) already recognized that the differences of physical *and* social environments are primary drivers of linguistic diversity among human groups. Cognitivism, however, adheres to methodological individualism, neglecting social and interactional contexts in experimental settings. Similarly, mainstream linguistic approaches focus on texts, sidelining not only the contextual features of language but also its multimodal nature. By contrast, ecological validity has been more prominent in subfields like ethnolinguistics, with methodologies such as Conversation Analysis leading the way. However, the latter can be still subject to a textualist pitfall as it operates on a restricted notion of "interaction".

To address this and other foundational issues, de Ruiter and Albert (2017) advocate for a "methodological fusion": experimental psycholinguistics can benefit from the insights of CA. Despite significant differences in their objects of study, methodologies, and epistemological assumptions (92-4), the authors argue in favor of "a practical synthesis that combines their strengths and avoids their weaknesses" (91). Findings undermining the validity of controlled experiments in social psychology make it "overly optimistic to assume that effects found under controlled laboratory conditions provide sufficient support for theories that explain behavior outside of the lab in our real lives as social agents" (98). On the other hand, CA has developed a careful process of preliminary qualitative analyses that reasonably "polishes" the working assumptions that, in turn, lead to descriptions of what happens (and why it happens at that point) in talk-in-interaction (96). De Ruiter and Albert advocate for "acceptable compromises

between internal validity (e.g., control of independent and potentially confounding variables, proper operationalizations, and accurate measurement, etc.) […] and *ecological* validity" (100).

For our purposes, greater attention to ecological validity can serve as a *bridging step* away from the traditional paradigms toward a more radical epistemology of languaging, closer to post-cognitivism. However, this measure alone may not be resolutive. In fact, it is possible to improve ecological validity within controlled experiments without renouncing the core theoretical tenets of cognitivism.

4.4 Representation-as-*praxis*

While evidence shows that languaging and abstract thought are largely embodied (Borghi et al. 2021), the capacity for indirect speech – speaking about referents not immediately present to the senses – seems unattainable without the notion of representation. This leads to a critical question: how is offline cognition achieved?

In trying to retain any useful idea of representation within post-cognitivism, a firm externalist position is needed. Neural correlates or symbolic structures are far from exhausting the explanation of human cognitive and linguistic behavior. Languaging, which is intrinsically cognitive, is, instead, continuous with in-world action (Van Dijk, Withagen 2015).

Assuming a capacity to represent what is absent from immediate bodily experience, representations must derive from a general principle to action. Human transformative activity, defined as a conscious act of *objectification*, positions language as a "productive technique" (Thao 1984) that participates in a fundamental process of duplication. This marks a qualitative change in the continuity between animal and human existence, defining how we engage with and through our ecological context. As Marx (1932, 31) explained:

> The animal is immediately one with its life activity. […] Man makes his life activity itself the object of his will and of his consciousness. It is not a determination with which he directly merges. […] The object of labor is, therefore, the objectification of man's species-life: for he duplicates himself not only, as in consciousness, intellectually, but also actively, in reality, and therefore he sees himself in a world that he has created.

This objectification of activity may take the form of linguistic representations – not as fixed mental descriptions of the world, but as habits grounded in *praxis*. From this perspective, the possibility for indirect speech and offline linguistic cognition emerges from normatively informed, enlanguaged practices.

What distinguishes representations as habits of *praxis* from traditional representations? Classic descriptions frame representations as static information housed in the brain, corresponding directly to external objects. In contrast, representation-as-*praxis* embodies *transformation*, where representations do not mirror the external world but serve as a *moment* of human activity. In a similar vein, Cuffari and Figueiredo (2025) frame their concept of *utterance* as acts of dialogic nature, forcing thereby a relational perspective: "[e]merging from and always tied to dialogical activity, an utterance reflexively regulates the shared moment of interaction that generates and frames it" (6). Representations, in this sense, are attuned to the situation, embodying more than they apparently contain.

A digression on Peirce's notion of universals may further clarify this concept of representation.[4] Consider the general concept of *dog*, which allows us to identify all dogs as sharing something in common. Peirce asks whether this shared quality is created by the mind or exists independently. McNabb (2018) explains that the universal meaning of *dog* cannot be understood as the sum of individual instances (e.g., dalmatians, my aunt's dog, three-legged dogs). Instead, the universal *dog* encompasses a continuum of possible dogs. Peirce privileges here universals over particulars, granting them a reality akin to the law of gravity, which is as real as any specific instance of a falling stone. Universals, then, are not static abstractions but principles that operate actively in the world.

While this perspective might still seem compatible with the storable and internal status of representations, for Peirce, meaning is not derived from a correspondence between a mental state and a thing in the world; instead, what something *is* must be understood as a function of what it *does*.

How, then, are we conscious of this universal *dog* without relying on mental storage? A possible answer lies in habits formed through experiences with particular dogs, where habits are "tendencies actually to behave in a similar way under similar circumstances in the future" (Peirce 1935 [CP: 5.487]). Universals manifest as patterns that guide our knowledge of particulars, rather than as mental images we retrieve. The relationship between the universal representation of *dog* and a particular dog is not one of equivalence: it emerges dynamically as part of the general cognitive (and not specifically linguistic) ability to generate and recognize habits. Consequently, the relationship between linguistic expression and the thing it represents cannot be one of simple identity. Representations, in this

4 As an anonymous reviewer proposes, Morris' (1938) may serve to further understand language through Piercean lens. For a more recent discussion of the interaction between enaction, the role of representation, and Peirce's philosophy see Fanaya (2021).

sense, are social products of our cognitive life, rather than an internal-only prerequisite for it.

Recognizing representations as distinct from what they represent restores the transformative *living* power of languaging – its ability to reshape and redefine the world through action.

5 Conclusion

How to account for our linguistic life has proved a challenging task for post-cognitivist approaches. Four thematic points were offered as a blueprint to put such efforts on the right path. In so doing, three further directions should be highlighted.

First, a constant and non-trivial conversation with linguistics is key to avoiding sidelining several decades of previous pertinent elaboration. The two disciplines share a history, and many foundational questions have already been asked in a relevant way.

Second, the pervasiveness of language in our life should be considered while rethinking cognition. We suggest that the post-cognitivist understanding of languaging here proposed strongly relates to the features of situatedness and relationality that are being highlighted against classic cognitive science. This alikeness, in fact, goes both ways. On one hand, languaging falls into the wider category of coordinative interaction. This realization should contribute to breaking the spell of all overly exceptionalist conceptions of language. On the other hand, it is true that in many instances language connects to our cognitive activity. Thus, far from claiming that *all* cognition is linguistic, or that language is the *only* key to understanding thinking, we stress its importance. Additionally, a similar notion of languaging will help fight the problematic distinction assumed by cognitivists and many post-cognitivists between lower and higher-order cognition (Zahnoun 2021).

As for the third point, it is more of an admission. In this short article, we have not come to the point of discussing how our proposal relates to the rest of post-cognitivist social cognition theories. However, while aiming at deradicalizing the discussion on representations, we made a statement that calls for a reply from all fields of post-cognitivism: the ultimate form of social cognition is languaging, and failing to properly include its role in new theories is a mistake.

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